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QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121			AMINZAY, SHAIMA Q	
			ART UNIT	PAPER NUMBER
			2618	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,950

Applicant(s)

WEI ET AL.

Examiner

Shaima Q. Aminzay

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 3, 13, 18, 27, 32, 38, and 40 are objected under 37 CFR 1.75(c) as being improper, the phrase "and," should be "--- , and ---", and the phrase "39. The base" in line 15 of page 26 should be "--- 38. The base ---".

Applicant's correction is required:

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, and 16-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee (Lee et al., US Publication No. 2003/0050,086).

Regarding claim 1, Lee discloses a method for controlling power in a wireless communication system having multiple reverse-link communication channels (see for example, Figures 1-6, paragraph [006], lines 1-5, [007], lines 1-3, [008],

lines 1-6, [137], lines 1-7, wireless communication system multi-channel reverse link channels power control), the method comprising: adjusting power levels of a first set of channels and a corresponding pilot channel (see for example, paragraph [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, communication channels power level adjustments and the pilot channel); and adjusting traffic-to-pilot (T/P) ratios for one or more remaining channels independently of the power level of the pilot channel (see for example, paragraph [007], lines 1-3, [013], lines 1-4, [067], lines 1-5, [018], lines 1-2, [029], lines 1-6, [076], lines 1-4, [083], lines 1-6, [086], lines 1-6, [091], lines 1-5, [094], lines 1-5, [152], lines 1-7, the traffic to pilot ratio adjustment of some channels without the pilot channel power level).

Regarding claim 16, Lee discloses a system for controlling power in a wireless communication system having multiple reverse-link communication channels (see for example, Figures 1-6, paragraph [006], lines 1-5, [007], lines 1-3, [008], lines 1-3, [009], lines 1-5, [054], lines 1-3, [060], lines 1-4, [062], lines 1-5, [066], lines 1-6, [137], lines 1-7, wireless communication system multi-channel reverse link channels power control), comprising: a base station; and a mobile station coupled to the base station via a wireless communication link (see for example, paragraph [051], lines 3-11, [056], lines 1-3, [058], lines 1-3, and [062] through [068], the base station and mobile station links in a wireless communication

system); wherein the base station is configured to receive data from the mobile station on a plurality of reverse-link channels on the wireless communication link (see for example, paragraph [026], lines 7-11, [060], lines 1-4, [062], lines 1-5, [066], lines 1-6, the base station receives the mobile station transmission via reverse-link); and wherein the base station is configured to adjust a power level for a first set of reverse-link channels and a power level for a pilot channel (see for example, paragraph [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, communication channels power level adjustments and the pilot channel), and to adjust a traffic-to-power (T/P) ratio for each of one or more additional reverse-link channels (see for example, paragraph [007], lines 1-3, [013], lines 1-4, [067], lines 1-5, [018], lines 1-2, [029], lines 1-6, [076], lines 1-4, [083], lines 1-6, [086], lines 1-6, [091], lines 1-5, [094], lines 1-5, [152], lines 1-7, the traffic to pilot ratio adjustment of some channels without the pilot channel power level).

Regarding claim 2, Lee teaches all the limitations of claim 1, and further, Lee teaches maintaining ratios of the power levels of the first set of channels and the pilot channel while adjusting the power levels of the first set of channels and the pilot channel (see for example, paragraph [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10).

Regarding claim 17, Lee teaches all the limitations of claim 16, and further, Lee teaches wherein the base station is configured to adjust the power levels for the first set of reverse-link channels and the pilot channel to maintain ratios of the power levels for the first set of reverse-link channels to the power level of the pilot channel (*see for example, paragraph [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10*)

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action.

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 30 – 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Damjanovic (Damjanovic et al., US Publication No. 2003/0050,086).

Regarding claim 30, Damjanovic discloses a base station operable to communicate with a mobile station via a wireless communication channel (*see for example, Figures 1-11, paragraph [003], lines 1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station and mobile station links in a wireless communication system*), wherein the base station comprises: a processing subsystem (*see for example, Figures 1 and 3, paragraph [003], lines*

1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [079], lines 1-5, the base station transceiver subsystem (204)); and a transceiver subsystem coupled to the processing subsystem (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station transceiver subsystem (204) connected to the base station controller (processing subsystem, 202)); wherein the transceiver subsystem is configured to receive signals on a first set of reverse-link channels (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station transceiver subsystem (204) connected to the antenna receiving reverse-link channel signals), a pilot channel and one or more additional reverse-link channels (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station transceiver subsystem (204) connected to the antenna receiving reverse-link channel signals); and wherein the base station is configured to adjust power levels for the first set of reverse-link channels and a power level for the pilot channel (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [052], lines 1-14, [055], lines 1-21, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station adjust power level for the reverse-link and pilot channel), and to adjust a traffic-to-power (T/P) ratio for each of the one or more additional reverse-link channels (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [052], lines 1-14, [055], lines 1-21, [072], lines 1-17, [079],

lines 1-15, [097], lines 1-5).

Regarding claim 31, Damnjanovic teaches all the limitations of claim 30, and further, Damnjanovic teaches wherein the base station is configured to adjust the power levels for the single reverse-link channel and the pilot channel to maintain a ratio of the power level for the single reverse-link channel to the power level of the pilot channel (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [052], lines 1-14, [055], lines 1-21, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station adjust power level for the reverse-link and pilot channel*)

Regarding claim 32, Damnjanovic in view of Lee teach all the limitations of claim 30, and further, Lee teaches wherein the base station is configured to determine whether data received on the single reverse-link channel contains errors (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5*) and, if the data received on the single reverse-link channel contains errors, to cause the power levels of the single reverse-link channel and the pilot channel to be incremented and, if the data received on the single reverse-link channel does not contain errors, to cause the power levels of the single reverse-link channel and the pilot channel to be decremented (*see for example, paragraph [007], lines 1-23, [017], lines 1-25, [045], lines 1-16, [048],*

lines 1-7, [049], lines 1-13, [050], lines 1-19, [078], lines 1-13, [080], lines 1-19, [081], lines 1-14, [082], lines 1-20, [084], lines 1-18, [086], lines 1-24).

Regarding claim 33, Damnjanovic teaches all the limitations of claim 30, and further, Damnjanovic teaches wherein the base station is configured to cause the power levels of the single reverse-link channel (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station transceiver subsystem (204) connected to the antenna receiving reverse-link channel signals*) and the pilot channel to be incremented or decremented by sending corresponding messages to a mobile station which is configured to increment or decrement the power levels of the single reverse-link channel and the pilot channel in accordance with the messages (*see for example, paragraph [007], lines 1-23, [017], lines 1-25, [045], lines 1-16, [048], lines 1-7, [049], lines 1-13, [050], lines 1-19, [078], lines 1-13, [080], lines 1-19, [081], lines 1-14, [082], lines 1-20, [084], lines 1-18, [086], lines 1-24).*

Regarding claim 34, Damnjanovic teaches all the limitations of claim 30, and further, Damnjanovic teaches wherein the first set of channels comprises multiple channels (*see for example, Figures 1-11, paragraph [003], lines 1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5*), wherein the base station is configured to adjust the power levels of the first set of channels (*see for*

example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5) and the corresponding pilot channel by determining for each channel in the first set whether data received on the single channel contains errors (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5) and determining a composite adjustment of the power levels of the first set of channels and the corresponding pilot channel based on errors received on the multiple channels (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5),

Regarding claim 35, Damnjanovic teaches all the limitations of claim 34, and further, Damnjanovic teaches wherein the base station is configured to determine the composite adjustment of the power levels of the first set of channels and the corresponding pilot channel by: for each channel in the first set (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [052], lines 1-14, [055], lines 1-21, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5), determining whether data received on the channel contains errors (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5), if the data received on the channel contains errors, determining*

a corresponding incremental power level adjustment, and if the data received on the single channel does not contain errors (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5*), determining a corresponding decremental power level adjustment; and computing the composite adjustment as a function of the incremental and decremental power level adjustments for the channels in the first set (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5*).

Regarding claim 36, Damnjanovic teaches all the limitations of claim 35, and further, Damnjanovic teaches wherein the function of the incremental and decremental power level adjustments for the channels in the first set comprises adding the maximum incremental power level adjustment and all of the decremental power level adjustments (*see for example, paragraph [017], lines 1-25, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [088], lines 1-18, [096], lines 1-16, [097], lines 1-5*).

Regarding claim 37, Damnjanovic teaches all the limitations of claim 35, and further, Damnjanovic teaches wherein the function of the incremental and

decremental power level adjustments for the channels in the first set comprises adding the maximum incremental power level adjustment to the minimum decremental power level adjustment (*see for example, paragraph [017], lines 1-25, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [088], lines 1-18, [096], lines 1-16, [097], lines 1-5*).

Regarding claim 38, Damnjanovic teaches all the limitations of claim 35, and further, Damnjanovic teaches wherein the function of the incremental and decremental power level adjustments for the channels in the first set comprises adding the minimum incremental power level adjustment to the maximum decremental power level adjustment (*see for example, paragraph [017], lines 1-25, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [088], lines 1-18, [096], lines 1-16, [097], lines 1-5*).

Regarding claim 39, Damnjanovic teaches all the limitations of claim 35, and further, Damnjanovic teaches wherein the function of the incremental and decremental power level adjustments is constrained to a limited number of quantized levels (*see for example, paragraph [007], lines 1-23, [017], lines 1-25, [045], lines 1-16, [048], lines 1-7, [049], lines 1-13, [050], lines 1-19, [078], lines 1-13, [080], lines 1-19, [081], lines 1-14, [082], lines 1-20, [084], lines 1-18, [086],*

lines 1-24).

Regarding claim 40, Damnjanovic teaches all the limitations of claim 30, and further, Damnjanovic teaches wherein the base station is configured to determine whether data received on each additional reverse-link channel contains errors (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station transceiver subsystem (204) connected to the antenna receiving reverse-link channel signals*) and, if the data received on the additional reverse-link channel contains errors, incrementing the T/P ratio of the additional reverse-link channel and (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station transceiver subsystem (204) connected to the antenna receiving reverse-link channel signals*), if the data received on the additional reverse-link channel does not contain errors, decrementing the T/P ratio of the additional reverse-link channel (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [005], lines 1-8, [036], lines 1-15, [040], lines 1-18, [051], lines 1-7, [072], lines 1-17, [079], lines 1-15, [097], lines 1-5, the base station transceiver subsystem (204) connected to the antenna receiving reverse-link channel signals*).

Regarding claim 41, Damnjanovic teaches all the limitations of claim 30, and further, Damnjanovic teaches wherein the base station is configured to send messages indicating the incremented or decremented T/P ratio of the additional reverse-link channel to a mobile station which is configured to set a power level of the additional reverse-link channel in accordance with the messages (*see for example, Figures 1 and 3, paragraph [003], lines 1-14, [007], lines 1-23, [017], lines 1-25, [040], lines 1-18, [045], lines 1-16, [048], [049], [050], [072], lines 1-17, [075], [078], [079], lines 1-15, [080], [081], [082], [086], and [084], [097], lines 1-5*).

Claim Rejections – 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-15, and 18-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (Lee et al., US Publication No. 2003/0050,086) in view of Nanda (Nanda et al., US Patent No. 6,571,104).

Regarding claims 3 and 18, Lee teaches all the limitations of claims 1, 16, and

further, Lee teaches wherein the first set of channels comprises a single channel (see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10), wherein adjusting the power levels of the first set of channels and the corresponding pilot channel comprises determining whether data received on the single channel [contains errors] (see for example, paragraph [016], lines 1-4, [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10) and, if the data received on the single channel [contains errors], incrementing the power levels of the single channel and the corresponding pilot channel (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19) and, if the data received on the single channel does not contain errors, decrementing the power levels of the single channel and the corresponding pilot channel (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Lee does not specifically teach received data contains errors, however, Lee teaches maintaining the control of frame errors in radio channels (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4,

[076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

In a related art dealing wireless communication systems reverse-link power control (see for example, *Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56*), Nanda teaches power control and received errors (see for example, *Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56*).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Nanda's received error control with Lee's power control system to provide improved "system performance and increase system capacity" by tracking the fading and managing "the power level at which signals are transmitted from base stations to mobile terminals and from mobile terminals to base stations" (*Nanda, column 1, lines 11-18*).

Regarding claims 7 and 21, Lee teaches all the limitations of claims 1, 16, and further, Lee teaches wherein the first set of channels comprises multiple channels (see for example, *paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10*), wherein adjusting the power levels of the first set of channels and the corresponding pilot channel comprises determining for each channel in the first set whether data received on the single channel

[contains errors] (see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10) and determining a composite adjustment of the power levels of the first set of channels and the corresponding pilot channel based on [errors] received on the multiple channels (see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Lee does not specifically teach received data contains errors, however, Lee teaches maintaining the control of frame errors in radio channels (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

In a related art dealing wireless communication systems reverse-link power control (see for example, Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56), Nanda teaches power control and received errors (see for example, Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Nanda's received error control with Lee's power

control system to provide improved "system performance and increase system capacity" by tracking the fading and managing "the power level at which signals are transmitted from base stations to mobile terminals and from mobile terminals to base stations" (*Nanda, column 1, lines 11-18*).

Regarding claim 13, Lee teaches all the limitations of claim 1, and further, Lee teaches wherein adjusting the T/P ratios for each of the one or more remaining channels comprises determining whether data received on the channel *[contains errors]* (see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10) and, if the data received on the channel *[contains errors]* (see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10), incrementing the T/P ratio for the channel and (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19, if the data received on the channel does not contain errors, decrementing the T/P ratio for the channel (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19,

[149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Lee does not specifically teach received data contains errors, however, Lee teaches maintaining the control of frame errors in radio channels (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

In a related art dealing wireless communication systems reverse-link power control (see for example, Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56), Nanda teaches power control and received errors (see for example, Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Nanda's received error control with Lee's power control system to provide improved "system performance and increase system capacity" by tracking the fading and managing "the power level at which signals are transmitted from base stations to mobile terminals and from mobile terminals to base stations" (Nanda, column 1, lines 11-18).

Regarding claim 27, Lee teaches all the limitations of claim 16, and further, Lee teaches wherein the base station is configured to determine whether data received on each additional reverse-link channel *[contains errors]* (see for example, paragraph [005], lines 1-6, [006], [012], [008], lines 1-3, [010], lines 1-1-

5, [016], lines 1-4, [021], [051], lines 3-11, [054], lines 1-5, [026], [066], [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10) and, if the data received on the additional reverse-link channel *[contains errors]* (see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10), incrementing the T/P ratio of the additional reverse-link channel (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19). and, if the data received on the additional reverse-link channel does not *[contains errors]* (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19), decrementing the T/P ratio of the additional reverse-link channel (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Lee does not specifically teach received data contains errors, however, Lee teaches maintaining the control of frame errors in radio channels (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4,

[076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

In a related art dealing wireless communication systems reverse-link power control (see for example, Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56), Nanda teaches power control and received errors (see for example, Figures 11-30, column 1, lines 1-11, column 2, lines 19-47, column 5, lines 20-56).

It would have been obvious to one of ordinary skill in the art at the time invention was made to include Nanda's received error control with Lee's power control system to provide improved "system performance and increase system capacity" by tracking the fading and managing "the power level at which signals are transmitted from base stations to mobile terminals and from mobile terminals to base stations" (Nanda, column 1, lines 11-18).

Regarding claims 4 and 19, Lee in view of Nanda teach all the limitations of claims 3, 18, and further, Lee teaches wherein determining whether the data received on the single channel [contains errors] is performed by a base station (see for example, paragraph [005], lines 1-6, [006], [012], [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [021], [051], lines 3-11, [054], lines 1-5, [026], [066], [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10), wherein the method further comprises the base station sending a message to a mobile station to increment

or decrement the power levels of the single channel and the corresponding pilot channel (*see for example, paragraph [005], lines 1-6, [006], [012], [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [021], lines 1-4[026], lines 1-11, [127], 1-11, [131], 1-4, [148], 1-19, [149], 1-16*).

Regarding claims 5 and 20, Lee in view of Nanda teach all the limitations of claims 4, 19, and further, Lee teaches wherein the mobile station is configured to increment or decrement the power levels of the single reverse-link channel and the pilot channel in accordance with the messages (*see for example, paragraph [005], lines 1-6, [006], lines 1-5, [012], 1-3, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [021], lines 1-4, [026], lines 1-11, [127], lines 1-11, [131], lines 1-4, [148], 1-19, [149], lines 1-16*).

Regarding claims 8 and 22, Lee in view of Nanda teach all the limitations of claims 7, 21, and further, Lee teaches wherein determining the composite adjustment of the power levels of the first set of channels and the corresponding pilot channel comprises: for each channel in the first set (*see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, , [026], lines 1-11, [127], lines 1-11, [131], lines 1-4, [148], 1-19, [149], lines 1-16*), determining whether data received on the channel [*contains errors*] (*see for example, paragraph [005], lines 1-6, [006], [012], [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [021], [051], lines 3-11, [054], lines 1-5, [026], [066], [069],*

lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10), if the data received on the channel [contains errors] (see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10), determining a corresponding incremental power level adjustment, and if the data received on the single channel does not [contains errors] (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19, determining a corresponding decremental power level adjustment; and computing the composite adjustment as a function of the incremental and decremental power level adjustments for the channels in the first set (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Regarding claim 9, Lee in view of Nanda teach all the limitations of claim 8, and further, Lee teaches wherein the base station is configured to cause the power levels of the single reverse-link channel and the pilot channel to be incremented or decremented by sending corresponding messages to the mobile station (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11,

[069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Regarding claims 10 and 24, Lee in view of Nanda teach all the limitations of claims 8, 22, and further, Lee teaches wherein the function of the incremental and decremental power level adjustments for the channels in the first set comprises adding the maximum incremental power level adjustment to the minimum decremental power level adjustment. *(see for example, paragraph [016], lines 1-4, [027], lines 1-11, [044], lines 1-5, [084], lines 1-5, [130], lines 1-6, [036], lines 1-5, [046], lines 1-8, [063], lines 1-6, [079], lines 1-3, [092], lines 1-4, [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).*

Regarding claims 11 and 25, Lee in view of Nanda teach all the limitations of claims 8, 22, and further, Lee teaches wherein the function of the incremental and decremental power level adjustments for the channels in the first set comprises adding the minimum incremental power level adjustment to the maximum decremental power level adjustment *(see for example, paragraph [016], lines 1-4, [036], lines 1-51, [063], lines 1-6, [079], lines 1-3, [092], lines 1-4, [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16,*

[162], lines 1-10, [148], lines 1-19) wherein the function of the incremental and decremental power level adjustments for the channels in the first set comprises adding the minimum incremental power level adjustment to the maximum decremental power level adjustment (see for example, paragraph [016], lines 1-4, [027], lines 1-11, [044], lines 1-5, [084], lines 1-5, [130], lines 1-6, [036], lines 1-5, [046], lines 1-8, [063], lines 1-6, [079], lines 1-3, [092], lines 1-4, [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Regarding claims 12 and 26, Lee in view of Nanda teach all the limitations of claims 8, 22, and further, Lee teaches wherein the function of the incremental and decremental power level adjustments is constrained to a limited number of quantized levels (*see for example, paragraph [016], lines 1-4, [017], lines 1-6, [026], 1-11, [027], lines 1-11, [044], lines 1-5, [051], lines 1-11, [084], lines 1-5, [130], lines 1-6).*

Regarding claims 14 and 28, Lee in view of Nanda teach all the limitations of claims 13, 27, and further, Lee teaches wherein determining whether the data received on the channel contains errors and incrementing or decrementing the T/P ratio for the channel is performed by a base station (*see for example, paragraph [005], lines 1-6, [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4,*

[051], lines 3-11, [054], lines 1-5, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10), wherein the method further comprises the base station sending a message to a mobile station indicating the T/P ratio for the channel (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19).

Regarding claim 15, Lee in view of Nanda teach all the limitations of claim 13, and further, Lee teaches the mobile station receiving the message and selecting transmission characteristics for the channel in accordance with the T/P ratio for the channel (see for example, Figures 1 and 3, paragraph [003], lines 1-14, [040], lines 1-18, [054], lines 1-3, [060], lines 1-4, [062] through [067], [072], lines 1-17, [079], lines 1-15, [079], lines 1-5, [084], lines 1-5).

Regarding claim 23, Lee in view of Nanda teach all the limitations of claim 22, and further, Lee teaches wherein the function of the incremental and decremental power level adjustments for the channels in the first set (see for example, paragraph [016], lines 1-4, [051], [051], lines 3-11, [069], lines 1-4, [076], lines 1-4, [088], lines 1-8, [096], lines 1-8, [118], lines 1-7, [148], lines 9-19, [149], lines 1-16, [162], lines 1-10, [148], lines 1-19) comprises adding the maximum incremental power level adjustment and all of the decremental power

level adjustments (*see for example, paragraph [016], lines 1-4, [027], lines 1-11, [044], lines 1-5, [084], lines 1-5, [130], lines 1-6*).

Regarding claim 28, Lee in view of Nanda teach all the limitations of claim 27, and further, Lee teaches wherein the base station is configured to send messages indicating the incremented or decremented T/P ratio of the additional reverse-link channel to the mobile station (*see for example, paragraph [005], lines 1-6, [006], [012], [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [021], lines 1-4[026], lines 1-11, [127], 1-11, [131], 1-4, [148], 1-19, [149], 1-16*).

Regarding claim 29, Lee in view of Nanda teach all the limitations of claim 28, and further, Lee teaches wherein the mobile station is configured to set a power level of the additional reverse-link channel in accordance with the messages (*see for example, paragraph [005], lines 1-6, [006], [012], [008], lines 1-3, [010], lines 1-1-5, [016], lines 1-4, [021], lines 1-4[026], lines 1-11, [127], 1-11, [131], 1-4, [148], 1-19, [149], 1-16*).

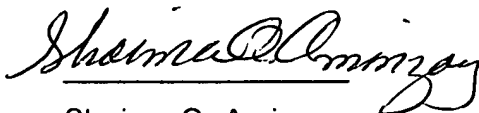
Conclusion

The prior art made of record considered pertinent to applicant's disclosure, see PTO-892 form.

Inquiry


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shaima Q. Aminzay whose telephone number is 571-272-7874. The examiner can normally be reached on 7:00 AM -5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Shaima Q. Aminzay
(Examiner)

August 17, 2006



8/21/06
QUOCHIEN B. VUONG
PRIMARY EXAMINER

Nay A. Maung
(SPE)